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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,063	05/09/2006	Catherine Robert	S1022.81243US00	1852
46329	7590	07/12/2006	EXAMINER	
STMicroelectronics Inc. c/o WOLF, GREENFIELD & SACKS, PC Federal Reserve Plaza 600 Atlantic Avenue BOSTON, MA 02210-2206			TSAI, HENRY	
			ART UNIT	PAPER NUMBER
			2181	
DATE MAILED: 07/12/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/535,063	Applicant(s) ROBERT ET AL.	
	Examiner Henry W.H. Tsai	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 5/13/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/13/05</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

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Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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Claim Rejections - 35 USC § 112

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 7-8, it is not clear what is meant by "a specific event from among second specific events" since it is not understandable. It is suggested to use either "form" or "among" instead of both.

In Claim 1, line 10, it is not clear which one is referred to by "said specific event" since "first specific events", and "second specific events" were mentioned in lines 3 and 8 respectively.

In claim 5, line 16, it is not clear what is meant by "transmitting a digital message from said stored characteristic data signal" since it is not understandable. A message should be transmitted from such as a memory place not a signal.

Applicant is required to review the claims and correct all language which does not comply with 35 U.S.C. § 112, second paragraph.

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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheon (U.S. Patent Application No. 6,070,210), herein referred to as Cheon'210.

Referring to claim 1, Cheon'210 discloses, as claimed, a processor (see Fig. 2) comprising: a method for transmitting digital messages through output terminals (through DATA port, see Fig. 2) of a monitoring circuit (DMA device 100, see Fig. 2) integrated to a microprocessor (200, see Fig. 2), digital message being representative of first specific events (such as the event for writing to memory 110) depending on the execution of an instruction sequence by the microprocessor (200, see Fig. 2), characterized in that it comprises the steps of:

- transmitting to the monitoring circuit (DMA device 100, see Fig. 2) through dedicated accesses a request signal

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(received through DREQ see Fig. 2) for the sending of a message associated with a specific event from among second specific events (the events for sending data from SCSI 120 to DMA device 100, see Dig. 2) independent from the execution of the instruction sequence by the microprocessor and a signal of characteristic data (through DATA port in memory 110., see Fig. 2) associated with said specific event;

- having the monitoring circuit (DMA device 100, see Fig. 2) read said request message (received through DREQ see Fig. 2) and, if resource management conditions are fulfilled (such as in the situation when memory 10 is available for being written), transmitting through a dedicated access an acknowledgement message (through DACK, see Fig. 2) and storing said characteristic data signal (stored in such as registers inside DMA device 100 for temporarily storing data sent from SCSI controller 120 see Fig. 2); and

- transmitting (through DATA port in memory 110., see Fig. 2) a digital message representative of the stored characteristic data signal.

Referring to claim 5, Cheon'210 also discloses: a device for transmitting digital messages between a monitoring circuit (DMA device 100, see Fig. 2) integrated to a microprocessor (200, see Fig. 2) and an analysis tool (CPU of the Cheon'210's

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system), first digital messages being representative of first specific events (such as the event for writing to memory 110) depending on the execution of an instruction sequence by the microprocessor, characterized in that it comprises:

means for detecting (such as ALU in the CPU of the Cheon'210's system) a specific event from among second specific events (the events for sending data from SCSI 120 to DMA device 100, see Dig. 2) independent from the execution of the instruction sequence by the microprocessor; means for transmitting a request (SCSI controller 120, see Fig. 2) for transmitting (through DREQ see Fig. 2) to the monitoring circuit (DMA device 100, see Fig. 2), when a specific event is detected, a request signal and a characteristic data signal associated with said specific event and in that the monitoring circuit (DMA device 100, see Fig. 2) comprises means for storing (stored in such as registers inside DMA device 100 for temporarily storing data sent from SCSI controller 120 see Fig. 2) the characteristic data signal provided by the request transmission means (SCSI controller 120, see Fig. 2), means for transmitting to the request transmission means an acknowledgement signal (DACK inside 100, see Fig. 2) when the characteristic data signal is stored, and means for transmitting (transmitting from

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DMA device 100 to memory 110 for writing thereto) a digital message from said stored characteristic data signal.

As to claim 2, Cheon'210 also discloses: the method of claim 1, in which the resource management conditions are fulfilled when the monitoring circuit (DMA device 100, see Fig. 2) is not transmitting messages representative of the first specific events (note this is in the situation when DMA device is available to be used).

As to claim 3, Cheon'210 also discloses: the method of claim 1, in which the digital message representative of the stored data signal comprises an identifier (such as valid/invalid bit) and the characteristic data signal (the data bits).

As to claim 4, Cheon'210 also discloses: the method of claim 1, in which the characteristic data (DATA) signal corresponds to the values on input terminals (such as the MBR for CPU connecting the data bus in the Cheon'210's system) of the microprocessor (200, see Fig. 2).

As to claim 6, Cheon'210 also discloses: the device of claim 5, in which the detection means (such as ALU in the CPU of the Cheon'210's system), the request transmission means (SCSI controller 120, see Fig. 2), the monitoring circuit (DMA device

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100, see Fig. 2), and the microprocessor are integrated in a same chip (see Fig. 2).

As to claim 7, Cheon'210 also discloses: the device of claim 5, in which the detection means (such as ALU in the CPU of the Cheon'210's system) is connected to input terminals (such as the MBR for CPU connecting the data bus in the Cheon'210's system) of the microprocessor (200, see Fig. 2).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wood et al. discloses after sound data transfer is complete the audio interrupt service routine may reset the count in the DMA controller to provide compatibility with software applications written for DMA mode transfer, and thereby achieve a form of DMA emulation.

Calder discloses the command processor is comprised of a store/fetch circuit for directly accessing the memory of the central processor; a fetch and buffer circuit for causing a fetch and for temporarily storing the results of the fetch (commands) in a buffer register file; an interpret controller

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for interpreting the commands and routing them to the cognizant peripheral apparatus, according to their function.

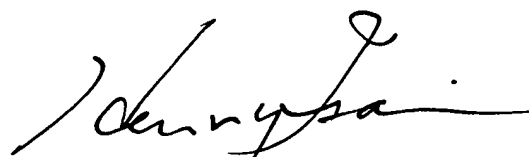
Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (571) 272-4176. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Fritz M. Fleming, can be reached on (571) 272-4145. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC central telephone number, 571-272-2100.

8. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into the Group at fax number: 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account.

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Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2100 will be promptly forward to the examiner.

A handwritten signature in black ink, appearing to read 'Henry W. H. Tsai', written in a cursive style.

HENRY W. H. TSAI
PRIMARY EXAMINER

July 3, 2006